

Numerical Methods for Fragmentation Modelling

Supervisors:

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Outline:

The goal of the project is to model the fragmentation process of a traditional warhead. The prediction of fragmentation can be useful for operational safety and lethality analysis. The existing mathematical model predicts mass, shape, initial position and velocity including projection angle for each individual fragment. This model has been implemented in MATLAB and is produced as a stand-alone tool.

The main task faced by the successful candidate will be to implement new algorithms within the existing software package under supervision of an experienced programmer. A reasonable research component of work is planned: review of literature and opportunity for proposing new ideas. A great learning opportunity guaranteed.

Required Skills:

- Strong programming skills are essential. Implementation of new algorithms will be expected from successful candidate.
- Good knowledge of MATLAB. Ability to develop GUI applications in MATLAB essential, however experience not strictly required.
- Willingness to learn new domain and ability to propose and implement new ideas are expected.
- Any prior experience with fragmentation modelling is NOT needed.

